currently applicable state and federal rules regarding collocation; and (3) provides advanced data services through a separate affiliate that satisfies the separation framework adopted by the Commission.

This approach offers a number of advantages. Most importantly, it would incent BOCs to deploy data services through a separate affiliate framework that effectively eliminates any risk of discrimination and cross-subsidization. As indicated above, and undoubtedly in many ILEC comments, the Commission's suggestion that an ILEC affiliate that does not meet all of the separation requirements set forth in the NPRM is necessarily a successor or assign is, as a matter of law, highly dubious. Any such conclusion is bound to be challenged and, frankly, unlikely to survive appellate review. Accordingly, rather than pursuing this dubious legal path and using section 251(c) "relief" as the carrot to incent the BOCs to adopt its separation framework, the Commission should use limited LATA relief to that end.

This approach also would incent BOCs to establish procompetitive policies with respect to collocation, access by CLECs to unbundled loops and related OSS, the only network opening measures that might be needed by CLECs seeking to provide data services. In this respect, this approach would promote deployment of advanced telecommunications capability not only by the BOCs, but also by CLECs, as envisioned by the NPRM.

C. Ameritech's Request For Targeted LATA Relief is Consistent With The Commission's LATA Boundary Modification Standards.

The limited LATA relief proposed by Ameritech is fully consistent with the standards enunciated by the Commission for approving LATA boundary modification requests. In evaluating such requests, the Commission has balanced the need for the

proposed modification against the potential harm from BOC activity if the request is granted. The Commission has also considered whether the proposed modification will have a significant deleterious effect on the BOC's incentive to open its local market pursuant to section 271. By any measure, the targeted LATA boundary modifications proposed by Ameritech satisfy these criteria.

As demonstrated above, there is clearly a need to modify the existing LATA framework to encourage Ameritech and the other BOCs to deploy advanced telecommunications capability ubiquitously. Absent such relief, Ameritech simply can not justify investing in the facilities necessary to provide advanced data services outside urban areas. Because most other providers of such services are focusing their deployment of advanced telecommunications capability in densely populated urban areas, the failure to modify LATA boundaries would deprive customers outside such areas the opportunity to participate meaningfully in the information revolution sweeping our economy and society. Modifying the existing LATA framework is, therefore, essential to ensure that all Americans have access to advanced telecommunications capability.

There is also little, if any, potential that the limited LATA modifications proposed by Ameritech could result in harm due to anticompetitive BOC activity. That is because the relief Ameritech proposes would be conditioned on a BOC taking certain procompetitive steps that would not only ensure that a BOC could not limit competition by other wireline providers of advanced data services, but which would actually encourage such competition. In the first place, under Ameritech's proposal, a BOC could

¹⁰³ NPRM, ¶ 190.

¹⁰⁴ Id.

obtain limited LATA relief only if it has first established procompetitive policies with respect to collocation and access to unbundled loops conditioned to provide data services and related OSS, which are the only market opening measures that might be needed by a CLEC to provide advanced data services. LATA relief would further be conditioned on BOC deployment of data services only through a separate affiliate. Because this separate affiliate could obtain collocation and access to conditioned loops only on the same prices, terms and conditions under which other carriers can and do purchase them, there is little, if any, possibility that a BOC that obtains limited LATA relief could restrict competition by other wireline providers of advanced data services. In any event, as the Commission observed in the NPRM, advanced data services can be deployed using numerous other technologies, including via satellite, cable and wireless systems. Consequently, the potential harm from anticompetitive BOC activity resulting from the limited and conditional LATA modifications proposed by Ameritech is minimal, if not altogether non-existent.

In addition, granting Ameritech and other BOCs limited LATA relief for the provision of data services would in no way undermine the objectives of, or "effectively eviscerate," section 271.¹⁰⁷ In the NPRM, the Commission concluded that it did not have authority under section 3(25) to grant Ameritech's request to establish a global LATA for data services because such large-scale changes in LATA boundaries would "effectively

¹⁰⁵ Ameritech notes in this regard that it has been providing intraLATA data services through a separate subsidiary since 1993, and has garnered less than five percent of the market for such services. Ameritech's experience should put to rest any arguments that a BOC that provides data services through a separate affiliate can, nevertheless, leverage its control over the voice network to restrict competition for data services.

¹⁰⁶ NPRM, ¶ 8 note 11. See also Erbin "Internet over Cable: Defining the Future in Terms of the Past" ¹⁰⁷ Id., ¶ 82.

eliminate" LATA boundaries for such services, and "eviscerate" the market opening incentives in section 271.¹⁰⁸ Ameritech disagrees that its prior request exceeded the Commission's authority under section 3(25) to approve changes in LATA boundaries. In any event, Ameritech's proposal for limited interLATA relief would in no way "eliminate" LATA boundaries, or "eviscerate" section 271, even with respect to data services.

In the first place, even for advanced data services, the limited LATA relief proposed by Ameritech is no substitute for section 271 authority because Ameritech could still transport data traffic only within the redefined LATA boundaries.

Consequently, except for the very limited transport between its packet switches and the nearest network access point ("NAP"), it could not transport data traffic across state lines, and therefore would be limited in its ability to provide data services to businesses or other institutions with locations in different states. In contrast, once Ameritech obtains section 271 authority for a particular state, it could transport the data traffic of any business or institution within that state to any location outside the state.

More importantly, the limited interLATA relief proposed would not enable

Ameritech to provide interLATA circuit-switched voice grade services to its customers.

While the number of customers purchasing data services is expanding quickly, it is still dwarfed by the number of subscribers to basic, circuit-switched voice services.

Moreover, so long as Ameritech cannot provide interLATA voice services, it will be unable to satisfy customer demand for integrated service packages. Accordingly, because Ameritech's long term success in the market depends on its obtaining full section 271

¹⁰⁸ NPRM, ¶ 81-82.

relief, it remains committed to meeting the requirements of section 271 at the earliest possible date. 109

The need for targeted LATA relief to encourage BOC deployment of advanced telecommunications capability, therefore, far exceeds any realistic potential for harm from anticompetitive BOC conduct if such relief is granted. Moreover, the limited nature of relief proposed would not effectively eliminate LATA boundaries, nor would it undermine the market opening incentives of section 271. Consequently, the LATA relief proposed by Ameritech is fully consistent with the Commission's prior LATA modification standards, and should be granted.

VIII. CONCLUSION

For the foregoing reasons, the Commission should act in a timely manner to adopt rules reflecting the foregoing suggestions.

Respectfully submitted,

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¹⁰⁹ In any event, Ameritech believes that, pending clarification of its obligation with respect to the provision of shared transport, it has already met the requirements of section 271.



Issues Concerning the Providing of Unbundled Subloop Elements by Ameritech

16 May 1996

Introduction and Background

This report, based on an analysis of the Ameritech network, identifies issues in providing unbundled subloop elements. Unbundling of any element must be approached cautiously to maintain network integrity, ensure reasonable service intervals, and manage costs. Because of the multiplicity of possible subloop elements, the unknown demand for subloop elements, and the wide variation of loop plant characteristics, providing subloop elements is particularly complex. Because of these and other factors (described below in detail), subloop unbundling should be approached with caution, if at all. If regulators determine that such unbundled subloop elements are required to promote competition, an examination of each subloop request on a case-by-case basis should occur.

Outside Plant Design Considerations

In order to understand the implications of unbundled subloop elements, it is necessary to examine the outside plant that provides telephone loops in companies such as Ameritech. A loop consists of a transmission path between the network interface (NI) located at the customer's premises and the main distribution frame (MDF) or other designated cross-connect facility in the Central Office (CO). Loops are defined by the electrical service interfaces they provide rather than by the media or technology used to provide the loop facility.

The loop network, or Outside Plant (OSP), is comprised of feeder and distribution plant. The feeder portion can consist of traditional copper from the MDF to the feeder distribution interface (FDI), such as a Serving Area Interface (SAI) or other metallic cross-connect fixture. Also, it may consist of copper- or fiber-fed digital loop carrier (DLC), which produces derived cable pairs as feeder to the FDI. The feeder pairs, or F1 pairs, are cross-connected to the distribution pairs, or F2 pairs, at the FDI. In some cases, as with downtown high-rise buildings or other customer locations that have large service demands, the copper cables serving these locations extend directly from the MDF to the NI inside the building without any intermediate cross-connect facility.

The geography served by the outside plant is segmented into areas that have common transmission characteristics and design criteria (e.g., length and wire gauge requirements). Each feeder route emanating from the central office provides loop facilities for many of these geographic segments. The distribution and feeder plants are planned to accommodate service demand forecast for the area served with the appropriate capacity and technology. The geographic segments of the OSP are the fundamental components of the loop network.

The CO provides the logical location at which to establish standard repeatable processes to accomplish interconnection in an equitable and efficient manner. Standard electrical characteristics are typically at the MDF which is planned and designed to facilitate connecting loop facilities to different network resources, such as the local serving switch, interoffice facilities or other network elements. Due to this loop design, the MDF (or other cross-connect facility) in the CO provides the natural location to direct unbundled loops to switching facilities or other network elements of certified local exchange companies (CLECs).

Therefore, provisioning entire unbundled loops, that is, loops originating at the MDF and terminating at the NI is a reasonable method for offering the use of existing facilities to market entrants, for which intensive capital investment is infeasible or impractical. In fact, Ameritech began offering use of unbundled loop facilities in Illinois and Michigan in 1995; projections indicate that by year end 1996, over 45,000 Ameritech loops will be used by CLECs with a projected ongoing growth rate exceeding 100% per year.

In contrast to the unbundling of complete loops, subloop unbundling would raise a variety of additional issues concerning planning, network architecture, operational processes, and operations support system capabilities. Careful planning on these issues is required to maintain the integrity, reliability, and security of the network.

Planning Issues

The demand for unburdied subloop elements is unclear. The engineering, provisioning, and pricing of unbundled subloop elements will depend on the projected market demand for specific subloop elements. Since there is no historic data in the Ameritech region (or other areas) for quantifying demand for subloop elements and, in general, no clear statements of intent or commitment to subscribe to specified volumes of subloop elements, projecting market demand for such elements is highly speculative.

Network Architecture Issues

To assess the feasibility of unbundling loop facilities into subloop elements, the variability of the OSP must be considered. The predominant loop designs present in the Ameritech network include approximately 12% of loops served via DLC, 73% of loops provided via FDIs, and 27% of loops fed directly from the MDF to customer sites without FDIs (numbers approximate; the total exceeds 100% because DLC loops also have FDIs).

Subloop interconnection is unavailable on 27% of Americach loops. Subloop unbundling is possible for the 27% of loops that are directly connected via copper cables. For the remaining loops, while a DLC or FDI location may seem to afford a possible site for interconnection, several factors mitigate against this as a standard policy.

The following examples illustrate specific implications of interconnection at the subloop element level:

Many existing SAIs are not capable of handling subloop interconnection. SAIs are implemented to provide feeder to distribution connection for a specific geographic serving area containing an identifiable number of living units or other customer sites with a specific forecasted service demand. Each SAI is designed to provide a specific feeder to distribution ratio that is appropriate for the area served. The SAI is sized to afford termination of the total number of feeder pairs and distribution pairs needed based on the expected service demands of the area served. In many cases, SAIs are ordered from the manufacturer with cable pairs preconnectorized and terminated in the factory.

SAIs can be pole mounted (if the size of the "box" permits) or ground mounted on a concrete pad. In either case, provision for the entry of a specific number of cable sheaths is provided. Typically, the full compliment of cables that can enter are provided upon initial installation and extended to locations in the feeder and distribution portions of the loop.

If a CLEC required access for some number of facilities to this cross-connect fixture, it is probable that the whole SAI would need to be replaced to provide this increase in cross-connect capability. As there is a size restriction for pole mounted fixtures, it is possible that replacement may involve relocation of the fixture to a new site with a concrete pad. Additionally, appropriate engineering, construction, and acquisition of right-of-way may be needed to move the fixture.

In the case of a pad mounted fixture, a determination of the best method for replacement would be required. This may depend upon the particular supplier's fixture design, the age of the fixture, the overall condition of the fixture and cross-connections inside, the type of splicing methods used (e.g., connectorized or not), the size of concrete pad, the number of conduits provided for cable entry, the amount of slack that can be provided for the entry cables, and several other possible considerations including how large the new fixture should be.

In addition, the number of CLECs that should be afforded access to the replacement fixture is unknown, as is the number of cross-connects to be provided for each one. This complicates the issues of cost recovery for all involved parties.

In Illinois, Ameritech has in excess of 24,000 above ground cabinets and 240 Controlled Environment Vaults (CEVs) with additional sites being installed each year. The effort to rebuild even a small fraction of these sites would be significant.

Space and interoperability issues limit existing Remote. Terminal (RTs) canability for subloop interconnection. RT sites are custom designed and configured for specific vendor equipment and specific service requirements. For example, one vendor's above ground cabinet can provide a maximum of 2016 derived lines. The space within this cabinet is fully utilized by the vendors' own transmission equipment, related support equipment (e.g., power equipment, batteries, protection) and existing feeder and distribution terminations.

In the case of CEVs, 16- and 24-foot long versions are available. The CEV size is selected based on the service demands of the area to be served and space requirements of contained equipment. Typically these units are pre-assembled at a factory prior to being shipped to a job site. As the cost of these units is very high, all available space inside the CEV has a planned use (e.g., each shelf in each equipment rack is designated for use). As a result, there typically is no undesignated space remaining to afford a CLEC the opportunity for entry.

Even if space in an RT were available, there are still significant technical and cost issues to be considered. DLC systems are specifically designed for a single provider network. More specifically, they are designed to operate in concert with a single CO-based unit (e.g., switch or central office terminal). Therefore, if space for a CLEC to place equipment capable of providing standard DS-1 interfaces to the Incumbent Local Exchange Carrier's (ILEC) RT were available, the majority of current RTs would not be equipped to interoperate with CLEC CO equipment.

Subloop unbundling causes new plant to be oversized. The administrative issue of cost recovery and sizing of new loop plant elements in ongoing normal construction programs is also a concern. The ILEC may be required to routinely increase the capacity (and therefore the cost) of each and every new SAI and DLC Remote Terminal introduced to the loop network by a factor based on speculative forecasts.

Subloop unbundling limits modernization of the outside plant. ILECs have been developing plans for the deployment of fiber-based broadband networks to provide multiple services, including voice telephony, high-speed interactive data, and video. These fiber-based networks also provide increased network integrity by replacing the more trouble-prone copper plant. This network modernization may be severely limited by the provision of subloop elements. If an interconnector has access to subloop elements in the copper plant, modernization of the plant to fiber could not be accomplished unless the interconnector was willing to discontinue use of its copper subloop elements. Therefore, subloop elements have the potential to freeze the outside plant technology.

Subloop unbundling increases the likelihood of incompatible signals. The deployment of certain technologies is impacted by the presence of existing technologies in the loop plant. For example, Asymmetric Digital Subscriber Line (ADSL), used for Video Dial Tone and Internet access, cannot coexist with T1 line loops inside the same binder group of a copper cable. Spectrum compatibility guidelines are administered to prevent this from occurring at the time of provisioning. If the subloop is unbundled, there will be no way of preventing multiple providers from deploying incompatible technologies and no way of managing their deployment in the loop plant. Therefore, new and existing services may be degraded by subloop unbundling, and costly ongoing rearrangements may be necessary to restore service quality.

Subloop unbundling destabilizes the plant and decreases network integrity. Stabilization of Ameritech's current plant has been designed to limit the craft field activity required in the normal service activation process. This is accomplished by sizing FDIs to accommodate specific numbers of distribution and feeder facilities based on the number of living units or business customers served, and a forecast of expected service demand. Thus, any spare feeder facility can be easily connected to any distribution pair thereby reducing both the number of field locations visited per dispatch as well as reducing the number of dispatches required. Many times there is no provision for additional feeder facilities to enter these sites as would be required to afford interconnection capability to a CLEC.

For the last several years, both RT sites and FDIs have been designed using pre-connectorized cables to reduce the costs associated with installation of these loop elements. This pre-connectorization further complicates interconnection from alternate sources of feeder facilities in the case of RT sites, as the distribution emanating from the RT is effectively "hard wired" to the DLC equipment. In the case of FDIs, the preconnectorized cables occupy all of the cross-connect capability in the FDI precluding the introduction of any additional facilities.

Subloop unbundling will lead to increased levels of plant rearrangement in fixtures and splices to accommodate the various interconnector requests. Studies have shown that the level of rearrangement and change in fixtures and splices correlates directly with customer trouble reports. Thus, the increase in OSP work required to implement subloop unbundling decreases network integrity.

Operational Issues

The manual work related to capacity provisioning (i.e., the planning and engineering associated with unbundled subloops), service activation (i.e., the initial provisioning of unbundled subloops), and service assurance (i.e., the ongoing proactive and reactive maintenance of those subloops) and its associated costs will be greater for subloop unbundling than for loop unbundling.

Subloop unbundling increases capacity provisioning costs. If use of subloops by CLECs is mandated, basic planning and engineering guidelines must be modified in order to ensure that all new growth investments allow for the possibility of CLEC demand at various interconnection points in the loop. For existing plant, as requests for entry are received by the ILEC, an engineer must study the particular network configuration in order to determine and document work required to enable the CLEC access to the plant requested (e.g., distribution plant from a cross-box to the customer's premises). It can take anywhere from hours to days for an engineer to analyze and draft an engineering work order.

Subloop unbundling increases service activation costs. A key factor which would contribute to increased work and cost for provisioning a service request centers around field dispatches required to visit the subloop interconnection points. Of all the work associated with service activation, outside plant craft work is second in cost to order negotiation for bundled loops. The fact that this cost has been contained is due to Ameritech's continued efforts to stabilize its plant through judicious use of rehabilitation and dedicated outside plant, thus reducing outside craft visits. Ameritech is currently experiencing a 20% dispatch rate for all bundled services (21% of service activation costs). In Illinois and Michigan, where unbundled loops have been offered, the dispatch rate has been as high as 36% (25% of service activation costs). However, with a required dispatch rate of 100% for subloop activation, the proportion of activation costs associated with outside dispatch rises to 46%. Overall, the total service activation cost per service request for a subloop is 53% higher than a similar request for an unbundled customer premises to MDF loop. This increase is in spite of the fact that other work is eliminated (e.g., placing a cross-connect from the MDF to the interconnector's equipment).

Subloop unbundling increases service susuance costs. Currently, bundled telephone services benefit from automated testing systems that can quickly verify impairments and guide the dispatch of a technician to the fault location. Unbundling loops limits the availability of automated testing because the imbedded testing systems require access to the loop at the ILEC switch, which is unavailable in the unbundled loop. However, the appearance of the unbundled loop in a central office provides access for testing (with technician involvement or new access equipment required). Unbundled subloop elements will require a technician dispatch to a field site for every trouble report received from the interconnector. Even in the ideal case, where the interconnector employs testing systems and procedures equal to the ILEC, complexity and cost are increased. For example, for a fault near the subloop interface, even the best testing system cannot accurately identify whether the fault is in the ILEC's facility or in the interconnector's facility. In cases where the interconnector is unable to provide testing because no test system is available, or digital architectures that limit testing are used, maintenance costs and time to repair may be significantly increased. Multiple dispatches may be necessary to enable a technician with the required training and equipment to be sent to the fault location, and coordinated joint testing may be needed.

Without remote testing, costly dispatches will be required to clear cases of "no trouble found." The current percentage of "no trouble found" trouble reports in Ameritach is 37% of OSP trouble reports. At a per dispatch time of 2 1/2 hours, the impact of dispatches resulting in no trouble found is significant. Additionally, to ensure security and network integrity, an Ameritach dispatch is necessary for all trouble reports where the interconnection requires access to the interconnection point for testing. This requires costly coordinated dispatches when there may be no fault in the Ameritach network.

A scenario was constructed to examine the cost increases resulting from work involved in resolving a trouble report. Based on Ameritech's current processes and experience to resolve troubles reported in unbundled loops, the average cost for the service assurance process will increase by a factor of about 56% for subloop unbundling over the cost of that for unbundled loops,

Operation Support Systems Issues

Subloop unbundling requires either expensive modifications to existing OSSs, or labor intensive manual workarounds. Timely and cost-effective engineering, provisioning, and administration of subloop elements may require
significant enhancements to Ameritech's OSSs above and beyond those required for loop unbundling. The scope of
these enhancements and the timing of their implementation will depend on the type and configuration of subloop
elements being offered, and the volume and frequency of the requests. Whereas manual work-arounds may be
viable for a small volume of requests, a mechanized approach will be more effective at higher volumes.

While no complete determination of the cost and timing of the necessary software system enhancements has been completed to date, preliminary examination shows that current system functionality will need to be enhanced to handle entry, storage, display, and communication of subloop location information. Consider, for example, changes in the service order flow-through process (i.e., the ability to provision service requests with no manual OSS intervention). The loop assignment system [LFACS] currently assumes a loop connecting the central office to the customer premises. It has limited ability to stop or start assignments mid-loop. In order to receive meetpoint and meetpoint location information and assign to those meetpoints, it may require LFACS to be fully rearchitected, or replaced, at considerable expense and time. In addition, in cases where digital loop electronics are involved, administratively difficult and costly preallocation of facilities may be needed.

Similarly, the interface between the service order administration and the assignment function [SOAC to LFACS] would need to be extended to handle other than F1 loop information. SOAC would need to be able to send this information to the circuit connectivity location and equipment inventory database [NSDB] which would also need to be enhanced to store and display loop information other than F1 feeder plant. If digital loop electronics are involved (and are being modeled in the central office equipment inventory system [SWITCH]), then SOAC needs to send the meetpoint location information to SWITCH as well.

In situations where the CLEC is providing the distribution portion of the loop to the customer premises, there may also be an impact on any systems currently containing a "living unit" field (e.g., ACIS SAG). These systems may need to be able to distinguish between both the ILEC's mestpoint with the CLEC and the actual customer location. ACIS SAG, SOAC, LFACS and other related systems would have to be studied to better understand this impact. Also, LFACS would need to be enhanced to accept pre-specified F1 loops from the CLEC.

Subloop unbundling also significantly complicates capacity planning. The loop planning system [LEIS] currently assumes an end-to-end loop. Its complex timing and sizing algorithms may require enhancements to handle spare capacity allocation and ownership assignment for subloop components.

In addition to the direct cost of enhancements of the OSSs, other related costs for subloop unbundling can be expected to be incurred. For example, the development of new or changed methods and procedures associated with system modifications and the associated training of technicians and other craft employees on these enhancements must also be considered.

As mentioned earlier, manual work-arounds would be necessary if the OSS enhancements are not undertaken. For example, each order would have to be coded for manual intervention y craft employees who would have to access each system in order to update and activate information. Such work-arounds would be required not only for each circuit set-up, but for all changes and disconnects as well. High flow-through has been essential for Ameritech to achieve its cost and quality objectives. Increasing the quantity of manual work-arounds is directly in conflict with these objectives.

Conclusion

This document identifies and examines issues associated with offering unbundled subloop elements in the Ameritech network. These issues are over and above those for intact loop unbundling, which Ameritech currently offers. Examination of these issues reveals that subloop unbundling will create enormous technical, administrative, and operational challenges that need to be contained by judicious limitation of subloop interconnection by the FCC.

JOINT STATEMENT OF PRINCIPLES APPLICABLE IN A SEPARATE SUBSIDIARY ENVIRONMENT BY AMERITECH AND NORTHPOINT

In anticipation of the Commission's Section 706 NPRM, Ameritech and NorthPoint Communications initiated discussions regarding the principles that should drive Commission decisions in this proceeding. Both parties entered into these discussions with a desire to conduct an open and honest dialogue that transcends adversarial posturing with the sense that such a dialogue could add significantly to the record. We began with NorthPoint's July 29, 1998, ex parte filing at the FCC but expanded discussions to other issues as well.

As a result of this dialogue, Ameritech and NorthPoint found common ground with respect to most of the major issues in this proceeding. Set forth below is a statement of the principles on which the two companies agree. Both companies urge the Commission to adopt policies that reflect and implement these principles in its Section 706 order, to the extent it has authority to do so.

Most importantly, both companies agree that a separate subsidiary for the provision of advanced data services ameliorates many of the concerns that might otherwise exist with respect to the possibility of discrimination and cross-subsidization by an ILEC. Ameritech and NorthPoint accordingly urge the Commission to adopt policies that incent ILECs to provide data services through a separate subsidiary.¹

Both companies also agree as to the level of separation that is appropriate. Specifically, both companies agree that the separate subsidiary framework proposed in the Notice should generally be adopted, subject to one clarification and one modification described in Ameritech's comments.

Assuming that an ILEC adopts the Commission's separate subsidiary framework, the following principles should also apply. Additional requirements beyond those discussed below may be appropriate for ILECs that provide data services on an integrated basis.

Although Ameritech questions whether, as a matter of law, an ILEC affiliate could be deemed a "successor or assign" of the ILEC or a "comparable carrier" under section 251(h) simply because it does not meet all of these separation requirements, Ameritech and NorthPoint agree that the Commission should incent ILECs to adopt a separate subsidiary framework.

Collocation Space Availability

All requests for collocation, including requests to reserve space for future use, should be handled on a first-come, first-served, nondiscriminatory basis.

Requests to reserve space for future use should be subject to appropriate, reasonable, and non-discriminatory anti-warehousing policies. Specifically, ILECs should accommodate such requests when space is available. However, if another entity seeks the reserved space for its immediate use, and alternative collocation space is not available, the party that had reserved such space for future use should be required to either take the space at that time or give it up to the new requestor. These principles should govern requests by ILEC affiliates and non-affiliates.

Among the options that should be explored when collocation space is not available are the removal of inactive equipment and conversion of administrative space. Both parties recognize that these options may or may not be appropriate, depending upon the circumstances, but agree they should be considered.

In the event a request for physical collocation is denied, the ILEC should permit CLEC personnel, subject to appropriate supervision and protection of confidential information, to inspect, at the ILEC's premises, copies of office floor plans with respect to the relevant space.

ILECs and CLECs should negotiate in good faith when space constraints prevent the ILEC from meeting a collocation request. Parties should attempt to negotiate a mutually acceptable solution before seeking regulatory intervention. The negotiation process, however, should never be used as an instrument of delay.

Collocation Intervals

CLECs should have the option of ordering collocation under tariff and, to this end, ILECs should file a tariff in each state in which they operate as an ILEC. CLECs that wish to negotiate collocation terms in an interconnection agreement should be able to do so.

ILECs may not discriminate between data affiliates and unaffiliated providers of data services with respect to intervals within which they provide collocation. ILEC compliance with this requirement should be gauged through performance measurements that show: average time to respond to a collocation request, average time to provide a collocation arrangement, and percent of due dates missed.

Charges for Collocation

Collocation charges should be based on forward looking long run incremental cost.

Charges for collocation should be assessed on a nondiscriminatory basis. ILEC subsidiaries should receive collocation at the same rates, terms, and conditions as an unaffiliated company. If an ILEC employs a separate subsidiary to provide advanced data systems, it is not necessary to employ an imputation test to address cross-subsidy concerns. An imputation requirement should, however, apply to ILECs that do not establish separate data affiliates.

Collocation providers should estimate the demand for collocation space and the average initial first-in cost should be recovered over time from multiple customers based on those demand estimates. There should not be "first in" penalties.

ILEC should permit CLECs to purchase their own equipment for virtual collocation, subject to an appropriate arrangement that provides the ILEC with the necessary administrative control over placement and access. Such arrangements should not prevent CLECs from giving equipment vendors a security interest in virtually collocated equipment, as necessary to obtain vendor financing.

Ameritech and NorthPoint agree that Ameritech's current practice of allowing the requesting carrier to negotiate directly with Ameritech approved installation contractors to determine both price and timing of installation of collocated equipment is an effective and efficient means of controlling costs.

Physical Collocation Alternatives

Parties should negotiate alternatives to traditional physical collocation arrangements where they are mutually beneficial. These alternatives include, without limitation, cageless physical collocation; collocation areas of less than 100 square feet; and virtual collocation.

Except for providing reimbursement for expenses, CLECs should not be charged for training ILEC service technicians.

To the extent, CLECs seek to use their own technicians to service virtually collocated equipment, ILECs should negotiate arrangements that permit CLECs to do so on an escorted basis.

Collocated Equipment

Carriers shall have the right to collocate equipment that complies with applicable industry approved safety and electrical interference standards. To the extent such equipment interconnects with other networks, it must also comply with applicable industry approved interoperability standards. ILECs should not refuse to collocate non-interconnected equipment for failure to comply with reliability standards.

An ILEC may not discriminate between its affiliate and non-affiliates in the enforcement of such standards; it must apply those standards equally to its affiliate and non-affiliates.

Access to Unbundled Loops

ILECs may not discriminate in favor of their affiliate in the rates, terms, or conditions on which they provide access to unbundled loops (including ADSL, HDSL, or ISDN loops).

ILECs should provide access to unbundled loops at remote terminals where technically feasible and space limitations permit. ILECs may not discriminate in the provision of such access in favor of their affiliate.

To the extent that appropriate unbundled loop facilities are not available and where the ILEC voluntarily undertakes to expand or modify its loop plant to make such loops available, it is appropriate that the requesting carrier, whether affiliated or not, bear the reasonable cost of such expansion or modification.

Interconnection agreements should prescribe reasonable intervals for provisioning of loops. The parties agree that for minimum volume orders of existing non-DS-1 loops, a standard interval of five days is reasonable where dispatch is not required. Reasonable intervals should be established based upon the type, quantity, and availability of facilities that have been requested.

An ILEC's affiliate and non-affiliated telecommunications carriers should have the same access, under the same terms, to the operations support systems (OSS), including pre-ordering (including, where available, loop qualification systems), ordering, provisioning, repair, and billing interfaces consistent with industry standards.

Spectrum Sharing

Spectrum management issues are highly complex and are thus best addressed through industry standards developed in industry fora. Industry standards should address, not only the ability of two or more carriers to share the same loop, but also the potential of one loop user to interfere with other users.

The Commission should not adopt specific rules regarding spectrum sharing until the standards bodies have completed their deliberations. This, of course, would not preclude a regulatory body from addressing specific activities that an individual carrier may undertake to impose a proprietary standard on other interconnected carriers, should that occur.

Limited InterLATA Relief

Ameritech and NorthPoint agree that a BOC should be given limited interLATA relief for advanced data services, as described below, if that BOC demonstrates that it: (1) provides advanced data services through a separate affiliate that satisfies the separation framework adopted by the Commission; (2) complies with all state and federal rules, as well as the terms of applicable tariffs and interconnection agreements, regarding collocation; and (3) complies with all state and federal rules, as well as the terms of applicable tariffs and interconnection agreements, relating to the availability of ADSL, HDSL, and ISDN compatible loops.

Upon a showing that these conditions have been met, the Commission should provide limited interLATA relief to permit the BOC: (1) to provide interLATA transport within a state for data services provided to customers with multiple locations in that state; (2) to access an ATM switch within the state; and (3) to provide transport from the ATM switch to the closest Network Access Point (NAP) outside the LATA in which the switch is located, regardless of whether that NAP is located within the state.

The Commission should establish a streamlined process (e.g. 60 days) to review BOC requests for limited LATA relief.

12.7 Interconnection with other Collocated Carriers.

Upon written request to Ameritech, AT&T shall be permitted to Interconnect its network with that of another collocating Telecommunications Carrier at Ameritech's Premises by connecting its collocated equipment to the collocated equipment of the other Telecommunications Carrier via a Cross-Connection or other connecting transmission facilities so long as (i) AT&T's and the other collocating Telecommunications Carrier's collocated equipment are both used for Interconnection with Ameritech or for access to Ameritech's Network Elements, (ii) AT&T provides the connection between the equipment in the collocated spaces via a Cross-Connection or other connecting transmission facility that, at a minimum, complies in all respects with Ameritech's technical and engineering requirements and (iii) the connecting transmission facilities of AT&T and the other collocating Telecommunications Carrier are contained wholly within space provided solely for Physical Collocation within Ameritech's Premises. If AT&T Interconnects its network with another collocating Telecommunications Carrier pursuant to this Section 12.7, AT&T shall, in addition to its indemnity obligations set forth in Article XXV, indemnify Ameritech for any Loss arising from AT&T's installation, use, maintenance or removal of such connection with the other collocated Telecommunications Carrier, to the extent caused by the actions or inactions of AT&T.

12.8 Interconnection Points and Cables.

Ameritech shall:

- 12.8.1 provide AT&T an Interconnection point or points physically accessible by both Ameritech and AT&T, at which the fiber optic cable carrying AT&T's circuits can enter Ameritech's Premises; provided that Ameritech shall designate Interconnection Points as close as reasonably possible to Ameritech's Premises;
- 12.8.2 provide at least two (2) such Interconnection points at Ameritech's Premises at which there are at least two (2) entry points for AT&T's cable facilities, and at which space is available for new facilities in at least two (2) of those entry points;
- 12.8.3 permit AT&T Interconnection of copper or coaxial cable if such Interconnection is first approved by the Commission; and
- 12.8.4 permit AT&T Physical Collocation of microwave transmission facilities, except where such Collocation is not practical for technical reasons or because of space limitations, in which case Ameritech shall provide Virtual Collocation of such facilities as required where technically feasible.

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- 16. Ameritech Interconnection Services (Cont'd)
 - 16.1 Ameritech Central Office Interconnection (Cont'd)
 - 16.1.2 Rules and Regulations (Cont'd)
 - (A) ACOI will be provided subject to the following provisions: (Cont'd)
 - (1) (Cont'd)

Customers may cancel orders for ACOI, subject to cancellation charges as described in Section 2.4.3 preceding.

(2) Space Reservation

A Customer may reserve additional central office floor space in a Company Central Office premises for physical collocation on the following basis:

- (a) The Customer may reserve additional space in a company premises in which it has or is ordering ACOI for permitted telecommunications equipment.
- (b) The Customer must pay the Space Reservation Charge (a nonrecurring charge) to place a reservation as set forth below.
- (c) The Customer can reserve an amount of physical collocation no more than the amount of physical collocation space it currently utilizes (or has ordered) for telecommunications purposes in the particular Company Central Office premises.
- (d) The priority of the reservation is established on a first-come, first-served basis as determined by the time the Company receives the Customer's space reservation request form. Reservations will be date stamped upon receipt.
- (e) The reservation will be maintained until the Customer either:
 - terminates its ACOI service: or
 - · cancels its order for additional Central Office Floor Space; or
 - relinquishes its reservation by opting to not enforce its reservation.

Certain material previously on this page now appears on original page 596.3.

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- 16. Ameritech Interconnection Services (Cont'd)
 - 16.1 Ameritech Central Office Interconnection (Cont'd)
 - 16.1.2 Rules and Regulations (Cont'd)
 - (A) ACOI will be provided subject to the following provisions: (Cont'd)
 - (2) Space Reservation (Cont'd)
 - (f) When an order for physical collocation is received and all the unoccupied space is covered by reservations, all reservations will be prioritized. The customer with the lowest priority reservation for which unoccupied space remains available after subtracting the space covered by reservations of higher priority reservations (the option party), will be given the option of enforcing their reservation by paying the Central Office Floor Space monthly recurring rate or relinquishing its reservation. The option party's reservation will be maintained as described in (e) above.
 - (g) If the Customer with the lowest priority enforces its reservation, then the customer(s) with next higher priority reservation, for which unoccupied space remains available after subtracting the space covered by reservations of the remaining higher priority reservations, will be given the option of enforcing or relinquishing its reservation. As long as all Customers with reservations for the available unoccupied floor space continue to enforce their reservations by paying the Central Office Floor Space rate, no space will be available for new orders for ACOI.
 - (h) The Customer that relinquishes its reservation by declining to enforce its reservation, may place a new reservation, but the reservation receives a new priority based on the time the new reservation is received in writing.
 - (i) The holder of a valid reservation may place an order for ACOI for the floor space reserved at any time. If there is sufficient unoccupied space available to accommodate the Customer's ACOI order after subtracting the space reserved by higher priority reservations, the order will be processed. If sufficient space to accommodate the order is not available after subtracting the space reserved by higher priority reservations, the order will be treated the same as a new order under (e) above.

All material previously on this page now appears on original page 596.4.

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16. Ameritech Interconnection Services (Cont'd)

16.1 Ameritech Central Office Interconnection (Cont'd)

16.1.2 Rules and Regulations (Cont'd)

(A) ACOI will be provided subject to the following provisions: (Cont'd)

(2) Space Reservation (Cont'd)

- (j) The Telephone Company may reserve ACOI Central Office Floor Space under the following conditions:
 - The Company's space reservation priority will be determined in the same manner as the space reservation priority for Customers. As Customers, the Company must submit a space reservation request form to place an order to reserve space. This reservation request is date stamped and processed in the same manner as Customers' space reservation requests.
 - The Company may reserve at least the amount of space reasonably necessary for the provision of a communications-related service, including interconnection and the provision of unbundled network elements.
 - The Company's reserved space must reasonably be anticipated to be used in 3 years, except for space reserved for switch conversion (including tandem switches and STPs) and growth and for augmentation and conversion of mechanical and electrical support systems and building infrastructure.
 - The Company's total space reservation cannot exceed the Central Office Floor Space currently used by the Company.
 - The Company will impute the Space Reservation Charge to the appropriate Company operations department for which the space is reserved.
 - The Company may enforce its reservation in the same manner in which the collocating Customer enforces its reservation. The Company will impute the Central Office Floor Space rate to the Company operations department for which the space is reserved.

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12.9 Allocation of Collocation Space.

- 12.9.1 AT&T may reserve Collocation space for its future use in Ameritech's Premises in accordance with the provisions of Schedule 12.9.1. Ameritech shall notify AT&T in writing if another Telecommunications Carrier requests Collocation space that is reserved by AT&T. AT&T shall within five (5) Business Days of receipt of such notice provide Ameritech either (i) written notice that AT&T relinquishes such space or (ii) enforce its reservation of space in accordance with the provisions of Schedule 12.9.1. Failure of AT&T to respond to Ameritech within the foregoing five (5) Business Day period shall be deemed an election by AT&T to relinquish such space.
- 12.9.2 Ameritech shall not be required to lease or construct additional space in a Premises to provide AT&T Physical Collocation when existing space in such Premises has been exhausted.
- 12.9.3 AT&T will provide Ameritech with a two (2)-year rolling forecast of its requirements for Collocation that will be reviewed jointly on a yearly basis by the Parties, in accordance with the planning processes described in <u>Schedule 12.9.3</u>. Ameritech will attempt to deliver Collocation pursuant to AT&T's forecasts to the extent that Collocation space is then available.
- 12.10 Security Arrangements. AT&T shall adopt, at the request of Ameritech and at AT&T's sole cost and expense, reasonable security arrangements as designated by Ameritech to separate AT&T's Collocation space from Ameritech's facilities, including the construction of a collocation cage.
- 12.11 Subcontractor and Vendor Approval. Ameritech shall permit AT&T to subcontract the construction and build-out of Physical Collocation arrangements with contractors approved by Ameritech. Approval of such subcontractors by Ameritech shall be based on the same criteria it uses in approving contractors for its own purposes. In addition, Ameritech shall allow AT&T to have an Ameritech-approved vendor install updates to collocated equipment, including software updates.

12.12 Delivery of Collocated Space.

12.12.1 Ameritech shall provide AT&T with a single point of contact for all inquiries regarding Collocation. AT&T shall request space for Collocation by delivering a written request to Ameritech. Each request for Collocation shall include (i) the Premises in which Collocation is requested, (ii) the amount of space requested, (iii) the interoffice transmission facilities AT&T will require for such space, (iv) the equipment to be housed in such space, (v) AT&T's anticipated power requirements for the space, (vi) any extraordinary additions or modifications (i.e., security devices, node enclosures, HVAC, etc.) to the space or